

IN THE CLAIMS

Please amend the claims as follows:

- 1 1. (currently amended) A disk drive employing a velocity controlled servo loop, the disk  
2 drive comprising:
  - 3 (a) a disk;
  - 4 (b) a head;
  - 5 (c) an actuator arm for actuating the head radially over the disk;
  - 6 (d) a voice coil motor (VCM) for rotating the actuator arm about a pivot, the VCM  
7 comprising a coil comprising a VCM resistance R;
  - 8 (e) a back EMF voltage detector for measuring a back EMF voltage across the coil;
  - 9 (f) a current detector for detecting a current I flowing through the coil;
  - 10 (g) an IR voltage detector, responsive to the current I detected by the current detector, for  
11 detecting an IR voltage proportional to the current I times the VCM resistance R;
  - 12 (h) a voltage compensator for substantially canceling the IR voltage from the measured  
13 back EMF voltage to generate a compensated back EMF voltage;
  - 14 (i) a control voltage generator, responsive the compensated back EMF voltage, for  
15 generating a control voltage applied to the coil to generate the current I flowing  
16 through the coil; and
  - 17 (j) a stall detector for comparing the current I detected by the current detector to a  
18 threshold, wherein a VCM stall condition is detected if the current I exceeds the  
19 threshold for a predetermined interval.
- 1 2. (original) The disk drive as recited in claim 1, wherein the current detector comprises a  
2 sense resistor in series with the coil.
- 1 3. (original) The disk drive as recited in claim 1, wherein the stall detector comprises:

- 2 (a) a clock; and
- 3 (b) a counter for counting a number of clock cycles the current I exceeds the threshold.
- 1 4. (currently amended) A method of ~~controlling velocity of an actuator arm~~ implementing a  
2 velocity controlled servo loop in a disk drive , the disk drive comprising a disk, a head,  
3 the actuator arm, and a voice coil motor (VCM) for rotating the actuator arm about a  
4 pivot, the VCM comprising a coil comprising a VCM resistance R, the method  
5 comprising the steps of:
- 6 (a) generating a control voltage from a command input and a compensated back EMF  
7 voltage;
- 8 (b) applying the control voltage to the coil to generate a current I flowing through the coil  
9 to move the actuator arm;
- 10 (c) detecting a back EMF voltage across the coil;
- 11 (d) detecting the current I flowing through the coil;
- 12 (e) detecting an IR voltage proportional to the current I times the VCM resistance R;
- 13 (f) subtracting the IR voltage from the detected back EMF voltage to generate the  
14 compensated back EMF voltage;
- 15 (g) comparing the current I to a threshold; and
- 16 (h) detecting a VCM stall condition if the current I exceeds the threshold for a  
17 predetermined interval.
- 1 5. (original) The method of controlling velocity of an actuator arm as recited in claim 4,  
2 wherein the step of detecting the current I comprises the step of detecting a current  
3 flowing through a sense resistor in series with the coil.

- 1 6. (original) The method of controlling velocity of an actuator arm as recited in claim 4,  
2 wherein the step of detecting a VCM stall condition comprises the step of counting clock  
3 cycles while the current I exceeds the threshold.
-